

LISTING OF THE CLAIMS:

This is a listing of the claims currently pending in this application:

1. (Previously Presented) An extracorporeal fluid transport line comprising:
a support element comprising a first and a second lateral portion and a rigid cross-piece for rigidly connecting the lateral portions; and
a first and a second length of tubing connected to said support element;
wherein the first and second lateral portions hold corresponding portions of the transport line to delimit at least the first length of tubing, said first length of tubing having a curved shape and a specified axial extension, said first length of tubing being configured to interact with movement means;
wherein the first lateral portion incorporates a fluid separator capable of separating fluid into a gaseous portion and a liquid portion, said fluid separator comprising a containing body and at least one hydrophilic membrane;
wherein said containing body has at least one inlet for receiving a fluid and at least a first outlet for receiving a liquid portion of said fluid, said containing body internally defining a fluid passage between said inlet and said first outlet; said containing body comprising a base and a cover portion, interacting with each other to form said fluid passage between said inlet and said first outlet; said base comprising an incorporated first tubular connecting element for receiving a first end of said first length of tubing, said inlet being associated to said first tubular connecting element; said cover portion comprising an incorporated second tubular connecting element, said first outlet being associated to said second tubular connecting element;
wherein said hydrophilic membrane is arranged internally of said fluid passage and interposed between said inlet and said first outlet; said hydrophilic membrane

having one side facing said first outlet and one side facing said inlet, for receiving said fluid and transferring only liquid towards said first outlet; said hydrophilic membrane being interposed between said base and said cover portion; and wherein the second lateral portion has a tubular profile and receives a second end of said first length of tubing and one end of said second length of tubing, which are fixed in this portion.

2. (Canceled.)

3. (Previously Presented) The fluid transport line of claim 1, wherein said containing body of said fluid separator comprises at least a second outlet for receiving the gaseous portion of said fluid.

4. (Canceled.)

5. (Previously Presented) The fluid transport line of claim 3, further comprising at least one hydrophobic membrane having one side facing said second outlet and one side facing said inlet, for receiving said fluid and transferring only gas towards said second outlet.

6-8. (Canceled.)

9. (Previously Presented) The fluid transport line of claim 1, wherein said base forms a through channel for putting said passage into fluid communication with an exterior, a hydrophobic membrane operating in said channel.

10. (Canceled.)

11. (Previously Presented) The fluid transport line of claim 1, wherein said second tubular connecting element has an axis of extension inclined with respect to that of said first tubular connecting element.

12. (Previously Presented) The fluid transport line of claim 1, wherein said hydrophilic membrane extends essentially throughout said containing body.

13. (Previously Presented) The fluid transport line of claim 1, wherein each of said base and said cover portion comprises corresponding base walls and corresponding perimeter edges emerging from said base walls, said hydrophilic membrane extending parallel to said base walls in a position separated from said base walls.

14. (Previously Presented) The fluid transport line of claim 13, wherein said containing body has a plurality of projections emerging from said base wall of said base.

15. (Previously Presented) The fluid transport line of claim 13, wherein said containing body has a plurality of projections emerging from said base wall of said cover portion.

16. (Previously Presented) The fluid transport line of claim 14, wherein said projections emerging from said base wall of said base comprise teeth distributed uniformly over a surface of said base wall of said base.

17. (Previously Presented) The fluid transport line of claim 15, wherein said projections emerging from said base wall of said cover portion comprise deflectors spaced angularly to guide the flow of liquid towards said first outlet.

18. (Previously Presented) The fluid transport line of claim 1, wherein said base of said containing body, said rigid cross-piece and said second lateral portion are made in a single piece.

19. (Previously Presented) The fluid transport line of claim 1, wherein said rigid cross-piece is essentially flat and parallel to a plane in which said first length of tubing lies.

20. (Previously Presented) The fluid transport line of claim 1, wherein said fluid separator incorporates at least one check valve predisposed to prevent a flow in said transport line which is inverse to a desired transport direction.

21. (Previously Presented) The fluid transport line of claim 20, wherein said check valve is predisposed along a pathway of said liquid portion, after said liquid portion has been separated from said gaseous portion by said fluid separator.

22. (Previously Presented) The fluid transport line of claim 21, wherein said check valve is arranged internally of said containing body in a zone comprised between said hydrophilic membrane and said first outlet.

23. (Previously Presented) The fluid transport line of claim 20, wherein said check valve comprises a mobile obturator organ, which operates on a passage mouth of said liquid portion.

24. (Previously Presented) The fluid transport line of claim 23, wherein said passage mouth is associated with said cover portion of said containing body.

25. (Previously Presented) The fluid transport line of claim 24, wherein said hydrophilic membrane is facing and distanced from a base wall of said cover portion, said passage mouth being associated with said base wall.

26. (Previously Presented) The fluid transport line of claim 3, wherein said hydrophobic membrane is situated in an upper zone of a fluid passage portion located upstream of said hydrophilic membrane, said hydrophobic membrane facing upwards,

with reference to a use configuration of said support element, in which configuration said first length of tubing has a vertical lie plane.

27. (Previously Presented) The fluid transport line of claim 26, wherein said upstream passage portion for passage of fluid has at least one passage section which increases in a direction towards said hydrophobic membrane.

28. (Previously Presented) The fluid transport line of claim 26, wherein said hydrophobic membrane is located superiorly with respect to an upper point of the operative surface of said hydrophilic membrane.

29. (Previously Presented) The fluid transport line of claim 1, wherein said containing body has a development which is prevalently in a transversal direction proceeding from said first lateral portion to said second lateral portion, said first outlet being located in a lateral end zone of said transversal development, in proximity of said second lateral portion.

30. (Previously Presented) The fluid transport line of claim 29, wherein said second outlet is arranged in an intermediate zone of said transversal development.

31. (Previously Presented) The fluid transport line of claim 1, wherein said hydrophilic membrane has a vertical lie plane, with reference to a use configuration in which said first length of tubing has a vertical lie plane.

32. (Previously Presented) A gas-liquid separator, comprising:

a containing body having at least one inlet for receiving a fluid and at least a first outlet for receiving a liquid portion of said fluid, and at least a second outlet for receiving a gaseous portions of said fluid, said containing body comprising a base and a cover portion, interacting with each other to form a fluid passage between said inlet and said

first and second outlets, the first outlet being arranged at an end of an outlet conduit solidly associated to said cover portion; said cover portion comprising an incorporated tubular connecting element of the removable type, said tubular connecting element being coupled to said outlet conduit;

at least one filtering element arranged internally of said fluid passage and having a side which faces said first outlet, and a side which faces said at least one inlet, for receiving said fluid and transferring only liquid towards said first outlet, said filtering element dividing said fluid passage into an upstream portion thereof, situated between said at least one inlet and said filtering element, and a downstream portion thereof, situated between said filtering element and said first outlet, said

second outlet being operatively associated with said upstream portion of said fluid passage, said filtering element being hydrophilic and being interposed between said base and said cover portion;

a hydrophobic element operating on said second outlet;

at least one check valve predisposed along a pathway of said liquid portion, after said liquid portion has been separated from said gaseous portion by said filtering element; said check valve being arranged internally of said containing body in said downstream portion of said fluid passage; said check valve comprising a mobile obturator organ, which operates on a passage mouth of said downstream portion; said passage mouth being associated with said cover portion of said containing body; said obturator organ being mobile inside a chamber which, with the obturator organ in an open position, communicates on one side with said passage mouth and, on the opposite side to the passage mouth, with said first outlet.

33. (Previously Presented) The separator of claim 32, wherein said second outlet is situated in an upper zone of said upstream portion of said fluid passage, with reference to a use configuration of said separator.

34. (Previously Presented) The separator of claim 33, wherein at least a part of said upstream portion of said fluid passage has a passage section which increases gradually in an upwards direction, with reference to a use configuration of said separator.

35. (Previously Presented) The separator of claim 33, wherein said hydrophilic element is flat, with a lie plane arranged vertically, with reference to a use configuration of said separator.

36. (Previously Presented) The separator of claim 32, further comprising a hydrophobic element operating on said second outlet, said filtering element and said hydrophobic element being flat and having lie planes arranged one transversally with respect to another.

37. (Previously Presented) The separator of claim 33, wherein said at least one fluid inlet is arranged in a lower zone of said upstream portion of said fluid passage, with reference to a use configuration of said separator.

38. (Previously Presented) The separator of claim 32, wherein said containing body comprises at least two base walls, which delimit said fluid passage and which face opposite sides of said filtering element, said filtering element being distanced from said base walls, a plurality of projections emerging from said base walls defining two rest planes for said opposite sides of said filtering element.

39-40. (Canceled.)

41. (Previously Presented) The fluid transport line of claim 1, comprising a container of a liquid to be infused into a patient, said second length of tubing extending between said container and said support element.

42. (Previously Presented) The separator of claim 32, wherein said filtering element is facing and distanced from a base wall of said cover portion, said passage mouth being associated with said base wall.

43. (Previously Presented) The separator of claim 32, wherein said tubular connecting element of the removable type comprises a luer connector.

44. (Previously Presented) The separator of claim 32, wherein said passage mouth is arranged on a base wall of said cover portion and faces said filtering element at a distanced position therefrom.

45. (Previously Presented) The separator of claim 44, wherein a plurality of projections is arranged on an internal side of said base wall.